

U.S. Application Serial No. 10/682,496
 Response to Office Action mailed May 31, 2005

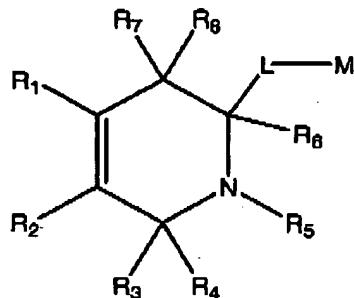
Docket No. SYR-HDAC-5003-U

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing Of Claims

1 (withdrawn). A compound comprising the formula:



wherein

R₁ and R₂ are taken together to form a substituted or unsubstituted aromatic ring;

R₃ and R₄ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R₃ and R₄ are taken together to form a ring;

R₅ is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₇ and R₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonlamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a

U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U

thiocarbonyl group, or R₇ and R₈ are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

2 (withdrawn). A compound according to claim 1, wherein R₁ and R₂ are selected such that the substituted or unsubstituted aromatic ring formed when R₁ and R₂ are taken together is a substituted or unsubstituted aryl ring.

3 (withdrawn). A compound according to claim 1, wherein R₁ and R₂ are selected such that an aryl ring is formed that is substituted and comprises one or more substituents that together form a ring fused to the aryl ring.

4 (withdrawn). A compound according to claim 1, wherein R₁ and R₂ are selected such that an aryl ring is formed that is a substituted or unsubstituted phenyl ring.

5 (withdrawn). A compound according to claim 4, wherein R₁ and R₂ are selected such that the phenyl ring is substituted and comprises one or more substituents that together form a ring fused to the phenyl ring.

6 (withdrawn). A compound according to claim 1, wherein R₁ and R₂ are selected such that an aryl ring is formed that is a substituted or unsubstituted heteroaryl ring.

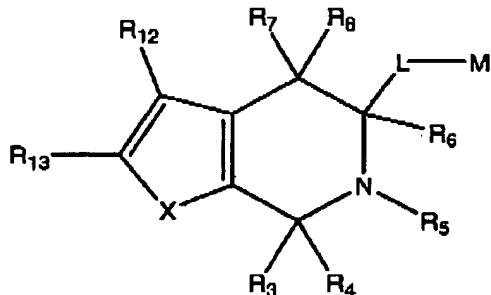
7 (withdrawn). A compound according to claim 1, wherein R₁ and R₂ are selected such that a substituted or unsubstituted heteroaryl ring is formed that is selected from the group of substituted or unsubstituted heteroaryl rings consisting of furan, thifuran, pyrrole, pyrazole, imidazole, triazole, isoxazole, oxazole, thiazole, isothiazole, pyridine, pyridazine, pyrimidine, pyrazine, benzofuran, benzothifuran, indole, quinoline, isoquinoline, cinnoline, naphthyridine, and pyridopyridine.

U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U

8 (withdrawn). A compound according to claim 1, wherein R₁ and R₂ are selected such that a substituted or unsubstituted fused heteroaryl ring is formed

9 (original). A compound comprising the formula



wherein

R₃ and R₄ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R₃ and R₄ are taken together to form a ring;

R₅ is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₇ and R₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonlamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R₇ and R₈ are taken together to form a substituent comprising a moiety

U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U

attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

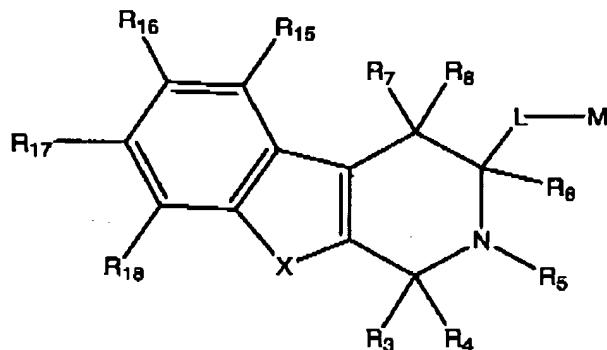
R_{12} and R_{13} are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R_7 and R_8 are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

X is selected from the group consisting of O, S, and NR_{14} , where R_{14} comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, hydroxyl, alkyl, aromatic ring, alkoxy, aryloxy, a carbonyl group, a thiocarbonyl group, and a sulfonyl group;

M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

10 (original). A compound comprising the formula:



wherein

R_3 and R_4 are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R_3 and R_4 are taken together to form a ring;

U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U

R₅ is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₇ and R₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonlamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R₇ and R₈ are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

R₁₅, R₁₆, R₁₇ and R₁₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonlamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, except where R₁₅ and R₁₆, R₁₆ and R₁₇, and/or R₁₇ and R₁₈ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

X is selected from the group consisting of O, S, and NR₁₄, where R₁₄ comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, hydroxyl, alkyl, aromatic ring, alkoxy, aryloxy, a carbonyl group, a thiocarbonyl group, and a sulfonyl group;

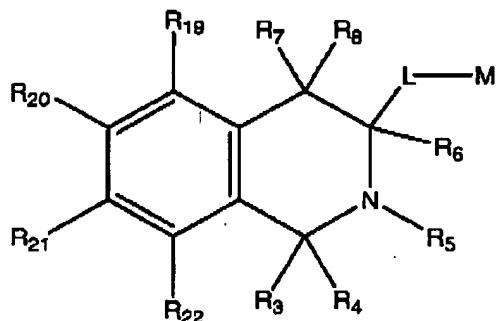
M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

11 (withdrawn). A compound comprising the formula:

U.S. Application Serial No. 10/682,496
 Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U



wherein

R₃ and R₄ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R₃ and R₄ are taken together to form a ring;

R₅ is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₇ and R₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonlamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R₇ and R₈ are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

R₁₉, R₂₀, R₂₁ and R₂₂ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonlamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl

U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U

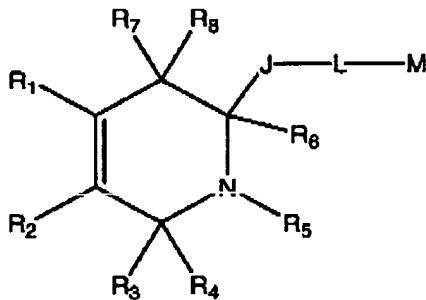
group, and a thiocarbonyl group, except where R₁₉ and R₂₀, R₂₀ and R₂₁, and/or R₂₁ and R₂₂ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

X is selected from the group consisting of O, S, and NR₁₄, where R₁₄ comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, hydroxyl, alkyl, aromatic ring, alkoxy, aryloxy, a carbonyl group, a thiocarbonyl group, and a sulfonyl group;

M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

12 (withdrawn). A compound comprising the formula:



wherein

R₁ and R₂ are taken together to form a substituted or unsubstituted aromatic ring;

R₃ and R₄ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R₃ and R₄ are taken together to form a ring;

R₅ is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

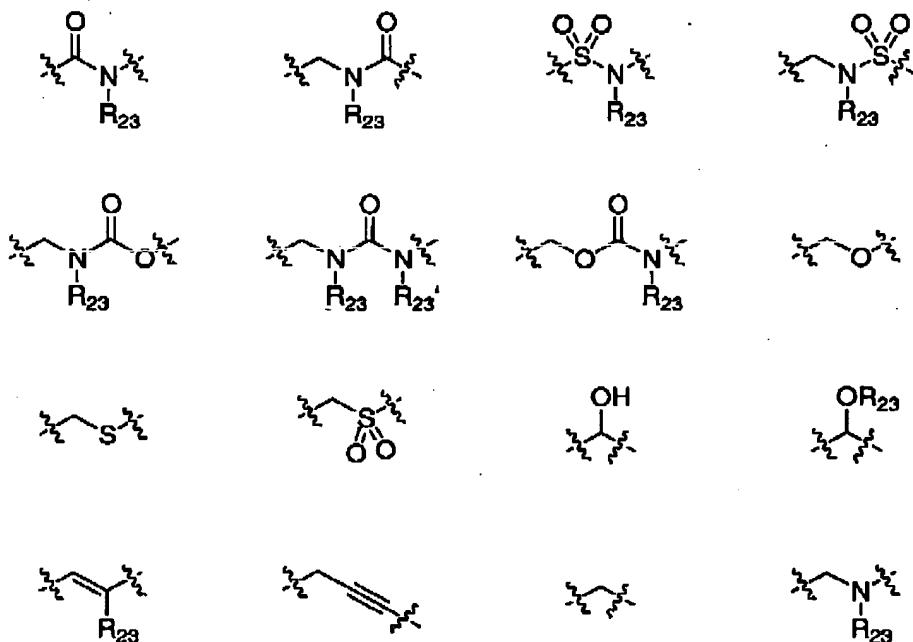
U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U

R_7 and R_8 are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R_7 and R_8 are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

M is a substituent capable of complexing with a protein metal ion;

J is selected from the group consisting of



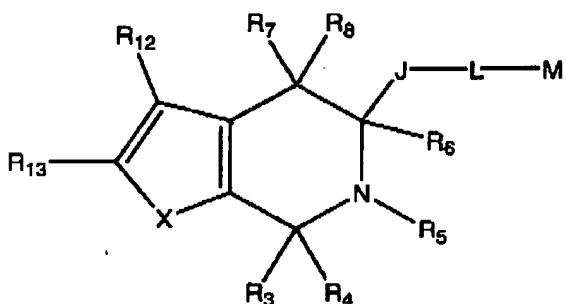
where R_{23} is a C_{1-10} alkyl; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the J substituent.

13 (original). A compound comprising the formula

U.S. Application Serial No. 10/682,496
 Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U



wherein

R_3 and R_4 are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R_3 and R_4 are taken together to form a ring;

R_5 is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R_6 is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R_7 and R_8 are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonlamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R_7 and R_8 are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

R_{12} and R_{13} are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonlamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R_7 and R_8 are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

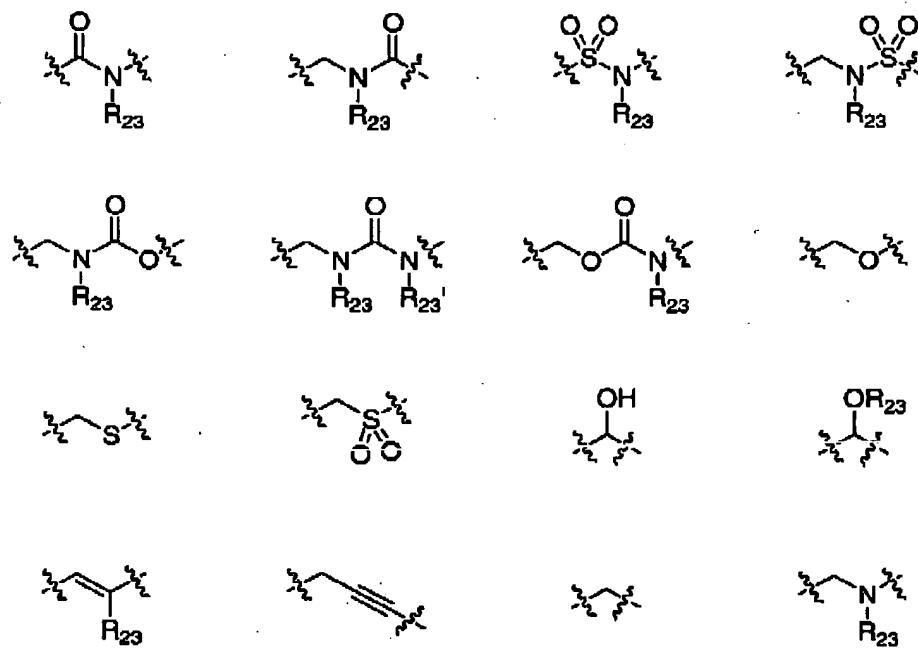
U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U

X is selected from the group consisting of O, S, and NR₁₄, where R₁₄ comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, hydroxyl, alkyl, aromatic ring, alkoxy, aryloxy, a carbonyl group, a thiocarbonyl group, and a sulfonyl group;

M is a substituent capable of complexing with a protein metal ion;

J is selected from the group consisting of



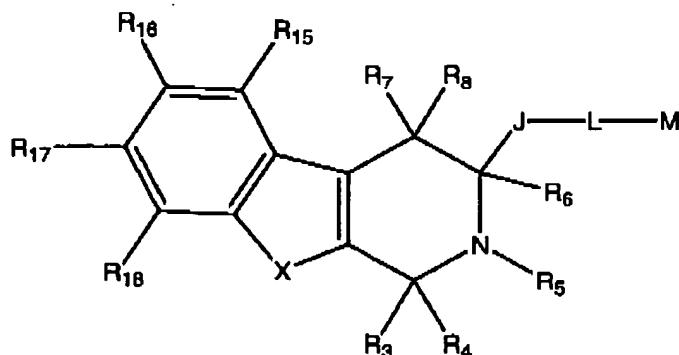
where R₂₃ is a C₁₋₁₀ alkyl; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the J substituent.

14 (original). A compound comprising the formula:

U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U



wherein

R₃ and R₄ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R₃ and R₄ are taken together to form a ring;

R₅ is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₇ and R₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R₇ and R₈ are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

R₁₅, R₁₆, R₁₇ and R₁₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl

U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

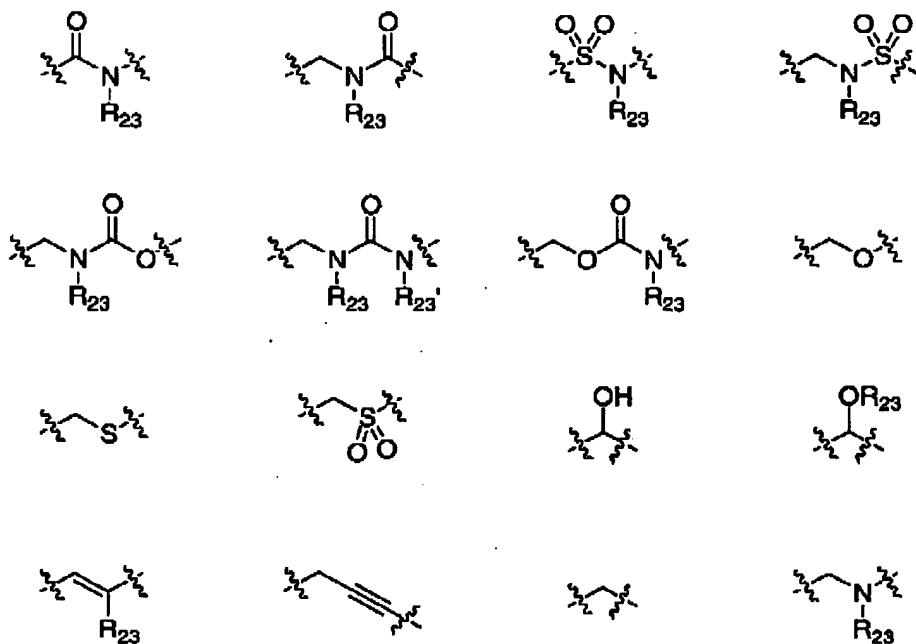
Docket No. SYR-HDAC-5003-U

group, and a thiocarbonyl group, except where R₁₅ and R₁₆, R₁₆ and R₁₇, and/or R₁₇ and R₁₈ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

X is selected from the group consisting of O, S, and NR₁₄, where R₁₄ comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, hydroxyl, alkyl, aromatic ring, alkoxy, aryloxy, a carbonyl group, a thiocarbonyl group, and a sulfonyl group;

M is a substituent capable of complexing with a protein metal ion;

J is selected from the group consisting of



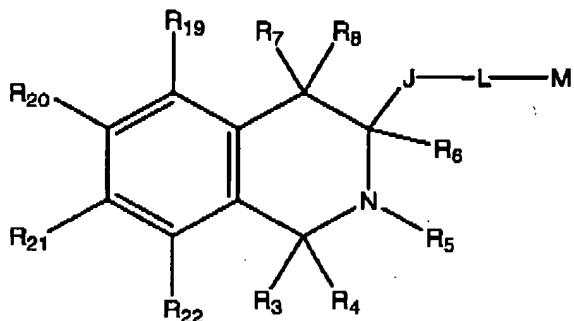
where R₂₃ is a C₁₋₁₀ alkyl; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the J substituent.

15 (withdrawn). A compound comprising the formula:

U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U



wherein

R₃ and R₄ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R₃ and R₄ are taken together to form a ring;

R₅ is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₇ and R₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonlamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R₇ and R₈ are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

R₁₉, R₂₀, R₂₁ and R₂₂ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonlamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl

U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

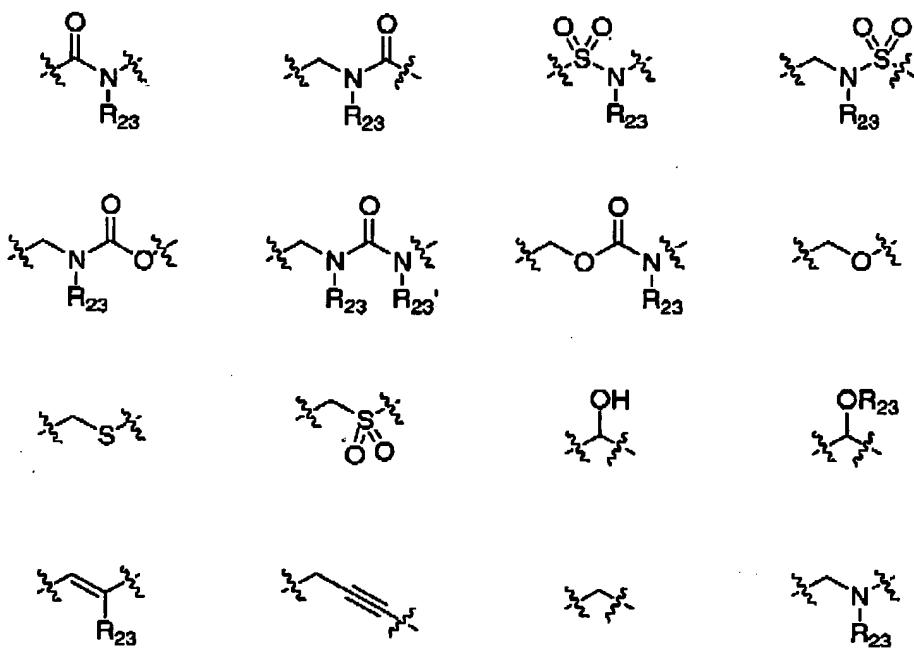
Docket No. SYR-HDAC-5003-U

group, and a thiocarbonyl group, except where R₁₉ and R₂₀, R₂₀ and R₂₁, and/or R₂₁ and R₂₂ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

X is selected from the group consisting of O, S, and NR₁₄, where R₁₄ comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, hydroxyl, alkyl, aromatic ring, alkoxy, aryloxy, a carbonyl group, a thiocarbonyl group, and a sulfonyl group;

M is a substituent capable of complexing with a protein metal ion;

J is selected from the group consisting of



where R₂₃ is a C₁₋₁₀ alkyl; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the J substituent.

16 (currently amended). A compound according to claim 4 or 9, wherein at least one of R₃ and R₄ is selected from a group of substituents where the moiety attached to the ring carbon is a C₁₋ C₁₀ alkyl, aminoalkyl, or oxaalkyl.

U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U

17 (currently amended). A compound according to claim + 9, wherein at least one of R₃ and R₄ is selected from a group of substituents where the moiety attached to the ring carbon is a branched C₁-C₁₀ alkyl, aminoalkyl, or oxaalkyl.

18 (original). A compound according to claim 17, wherein the C₁-C₁₀ alkyl, aminoalkyl, or oxaalkyl further comprises a substituent selected from the group consisting of an alkyl, aromatic ring, cyano group, halogen, and carbonyl group.

19 (original). A compound according to claim 17, wherein the C₁-C₁₀ alkyl, aminoalkyl, or oxaalkyl further comprises a substituted or unsubstituted aromatic ring.

20 (currently amended). A compound according to claim + 9, wherein at least one of R₃ and R₄ is selected from a group of substituents where the moiety attached to the ring carbon is an aromatic ring.

21 (currently amended). A compound according to claim + 9, wherein at least one of R₃ and R₄ is selected from a group of substituents where the moiety attached to the ring carbon is a substituted or unsubstituted phenyl ring.

22 (currently amended). A compound according to claim + 9, wherein at least one of R₃ and R₄ is selected from a group of substituents where the moiety attached to the ring carbon is a substituted or unsubstituted heteroaryl.

23 (currently amended). A compound according to claim + 9, wherein at least one of R₃ and R₄ is selected from a group of substituents where the moiety attached to the ring carbon is a substituted or unsubstituted heteroaryl selected from the group consisting of furan, thifuran, pyrrole, pyrazole, isoimidazole, triazole, isoxazole, oxazole, thiazole, isothiazole, oxadiazole, oxatriazole, pyridine, pyridazine, pyrimidine, pyrazine, triazine, benzofuran, isobenzofuran, benzothifuran, isobenzothifuran, indole, isobenzazole, quinoline, isoquinoline, cinnoline, quinazoline, naphthyridine, and pyridopyridine.

U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U

24 (currently amended). A compound according to claim + 9, wherein R₃ and R₄ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring.

25 (currently amended). A compound according to claim + 9, wherein R₃ and R₄ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 member alicyclic ring.

26 (currently amended). A compound according to claim + 9, wherein at least one of R₃ and R₄ is selected from a group of substituents where the moiety attached to the ring carbon is selected from the group consisting of an aldehyde, amide, ester, ketone, and carboxylic acid.

27 (currently amended). A compound according to claim + 9, wherein R₅ and R₆ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring.

28 (currently amended). A compound according to claim + 9, wherein R₅ and R₆ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 alicyclic ring.

29 (currently amended). A compound according to claim + 9, wherein R₆ and R₇ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring.

30 (currently amended). A compound according to claim + 9, wherein R₆ and R₇ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 alicyclic ring.

31 (currently amended). A compound according to claim + 9, wherein R₇ and R₈ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring.

32 (currently amended). A compound according to claim + 9, wherein R₇ and R₈ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 alicyclic ring.

33 (currently amended). A compound according to claim + 9, wherein R₇ and R₈ are taken together to form an imine having a substituent R₉ on the imine nitrogen selected from the

U.S. Application Serial No. 10/682,496
Response to Office Action mailed May 31, 2005

Docket No. SYR-HDAC-5003-U

group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, and sulfonylamino.

34 (currently amended). A compound according to claim 4 9, wherein R₇ and R₈ are taken together to form an alkene substituent having the formula =CR₁₀R₁₁ where R₁₀ and R₁₁ are each independently selected from a group of substituents consisting of hydrogen, halogen, alkyl, aryl, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, cyano, nitro, a carbonyl group, thiocarbonyl, and sulfonyl or where R₁₀ and R₁₁ are taken together to form an alkene.

35 (currently amended). A compound according to claim 4 9, wherein R₇ and R₈ are taken together to form an alkene substituent having the formula =CR₁₀R₁₁ where R₁₀ and R₁₁ are together together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring.

36 (original). A compound according to claim 35 wherein R₁₀ and R₁₁ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 member alicyclic ring.

37 (currently amended). A compound according to claim 4 9, wherein M is selected from the group consisting of:

